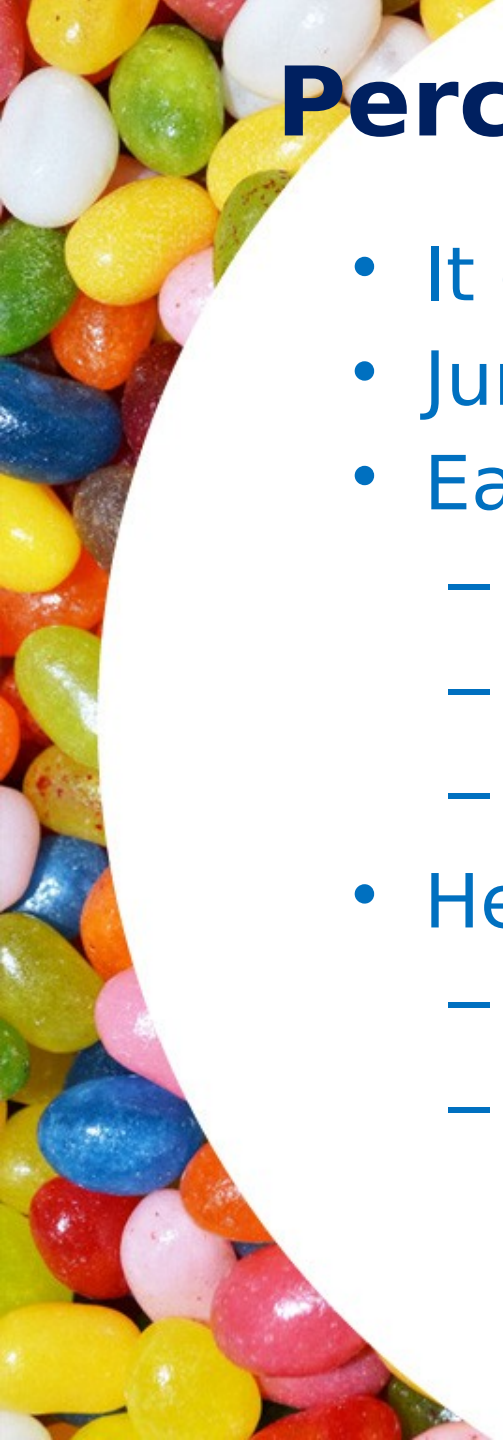
MARINE FORCES RESERVE

The following is a Health Promotion Brief brought to you by:
Marine Forces Reserve
Semper Fit
Health Promotions

MCCS
MARINE CORPS Community Services

UNITED STATES MARINE CORPS
SEMPER FIT
SPORTS, RECREATION & FITNESS

Can you
really
afford NOT
to eat
healthy?

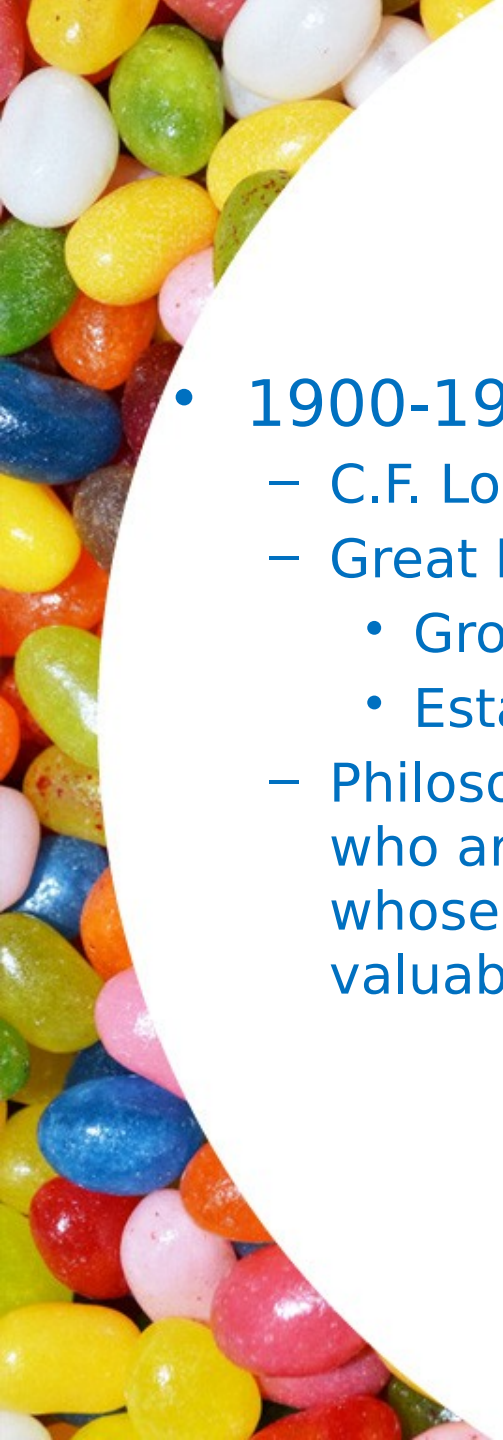


Perceptions against healthy eating

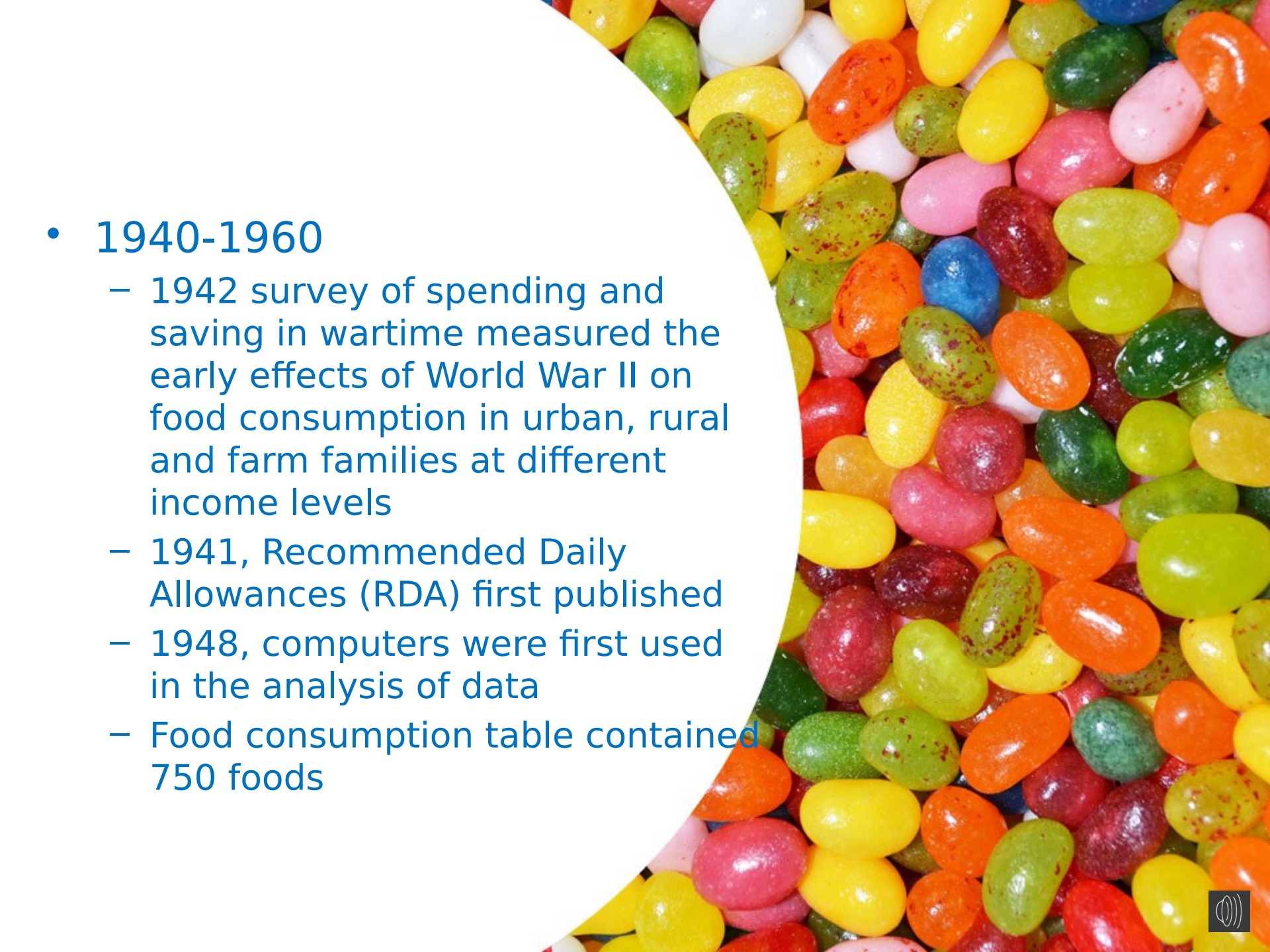
- It costs more to eat healthy
- Junkfood is more convenient
- Eating healthy means eating
  - Salads
  - Organic
  - Vegetarian/vegan diet
- Healthy eating means eliminating
  - Favorite foods
  - Carbohydrates

History of Food Consumption Studies

- Pre 1900
  - W.O. Atwater, first Director of the U.S. Dept. of Agriculture
  - Goal = obtain food consumption information that would help him develop recommendations on what a “working man” should eat and how families could spend their food money wisely
  - Food consumption table showed only 62 foods



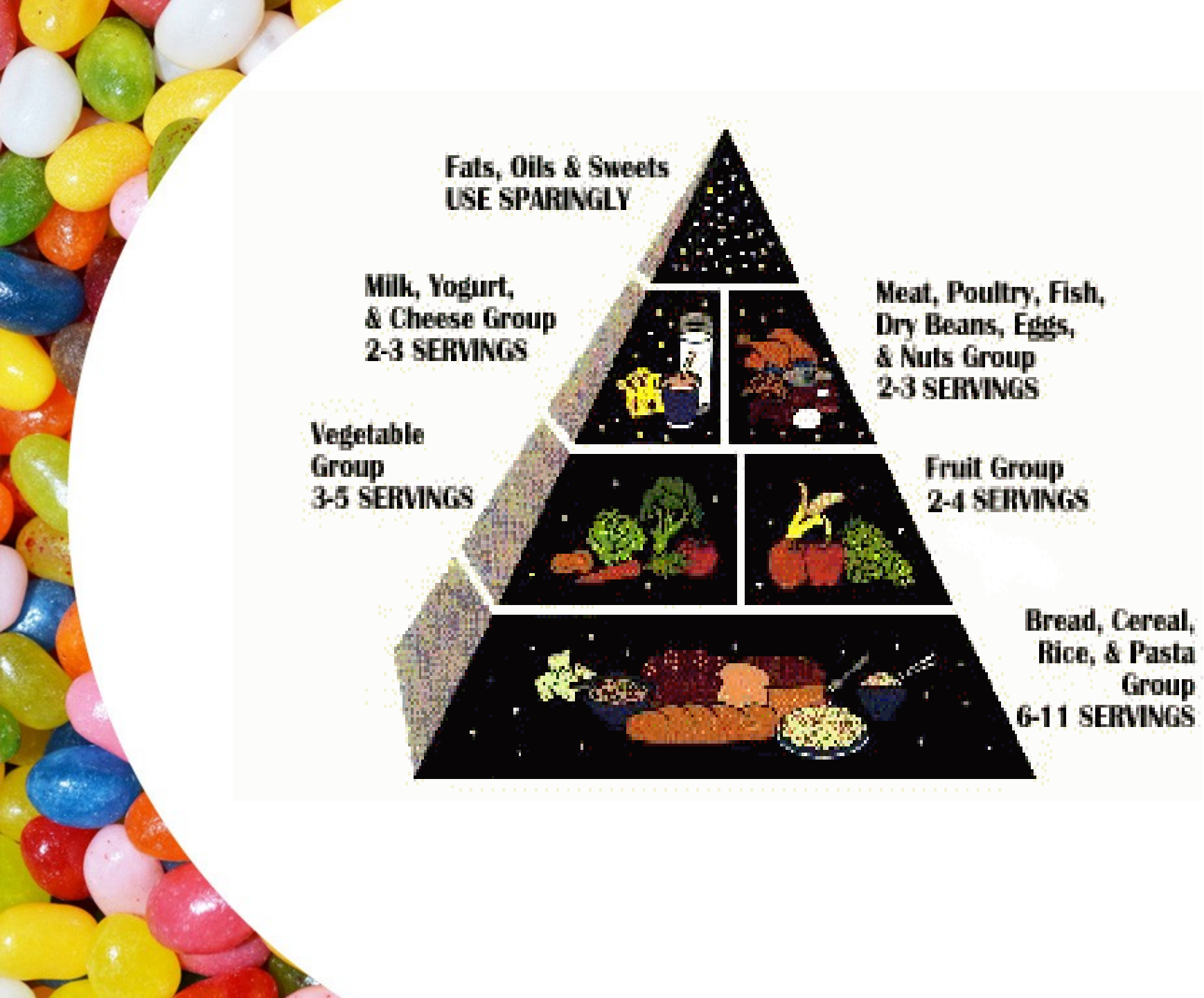
- 1900-1940
  - C.F. Longworthy replaced W.O. Atwater
  - Great Depression
    - Growing concern about the quality of American diets
    - Establishment of the National School Lunch Program
  - Philosophy = dietary records show the practice of those who are in health and vigor, whose lives are long and whose offspring are healthy, and that this will be valuable as a guide for others

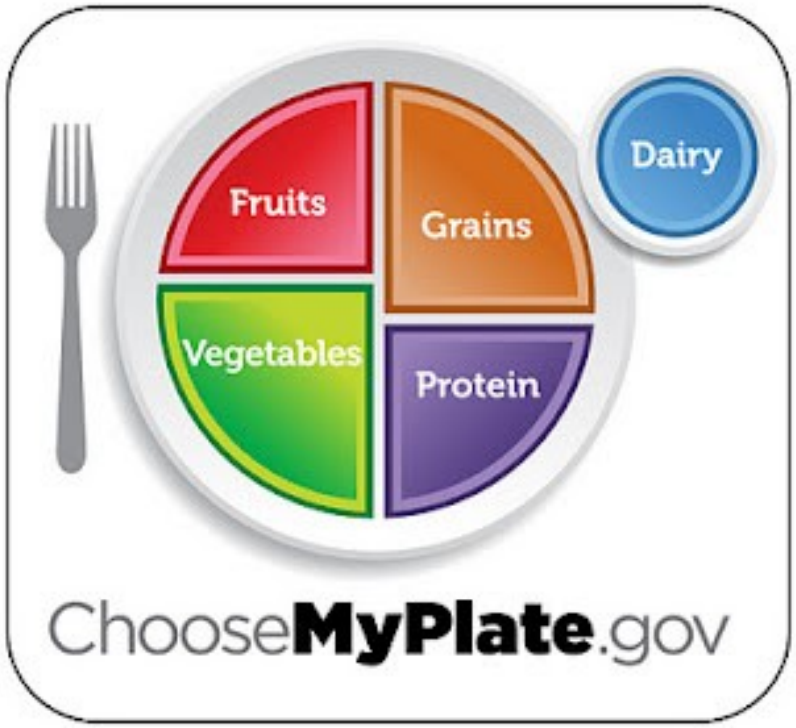


- 1940-1960
  - 1942 survey of spending and saving in wartime measured the early effects of World War II on food consumption in urban, rural and farm families at different income levels
  - 1941, Recommended Daily Allowances (RDA) first published
  - 1948, computers were first used in the analysis of data
  - Food consumption table contained 750 foods

- 1960-1980
  - Homemakers were asked to recall information on food intakes by individuals at home & away from home
  - Theory = information on food intake is more precise than household food use for the assessment of diet quality
    - Reports foods as eaten, excluding discard, and included both food eaten at home and away from home

- 1980- present
  - National Research Council committee recommended that surveys which give continuous (year to year) data on food consumption be conducted to keep pace with the fast changes in food consumption behavior
  - Follow-up telephone surveys first conducted
  - 1992, Food Guide Pyramid
  - 2011, ChooseMyPlate


Fats, Oils & Sweets
USE SPARINGLY
Milk, Yogurt,
& Cheese Group
2-3 SERVINGS
Meat, Poultry, Fish,
Dry Beans, Eggs,
& Nuts Group
2-3 SERVINGS
Vegetable
Group
3-5 SERVINGS
Fruit Group
2-4 SERVINGS
Bread, Cereal,
Rice, & Pasta
Group
6-11 SERVINGS


Fruits
Grains
Dairy
Vegetables
Protein
ChooseMyPlate.gov

Studies on the cost of eating healthy

2005 – Darmon, et al

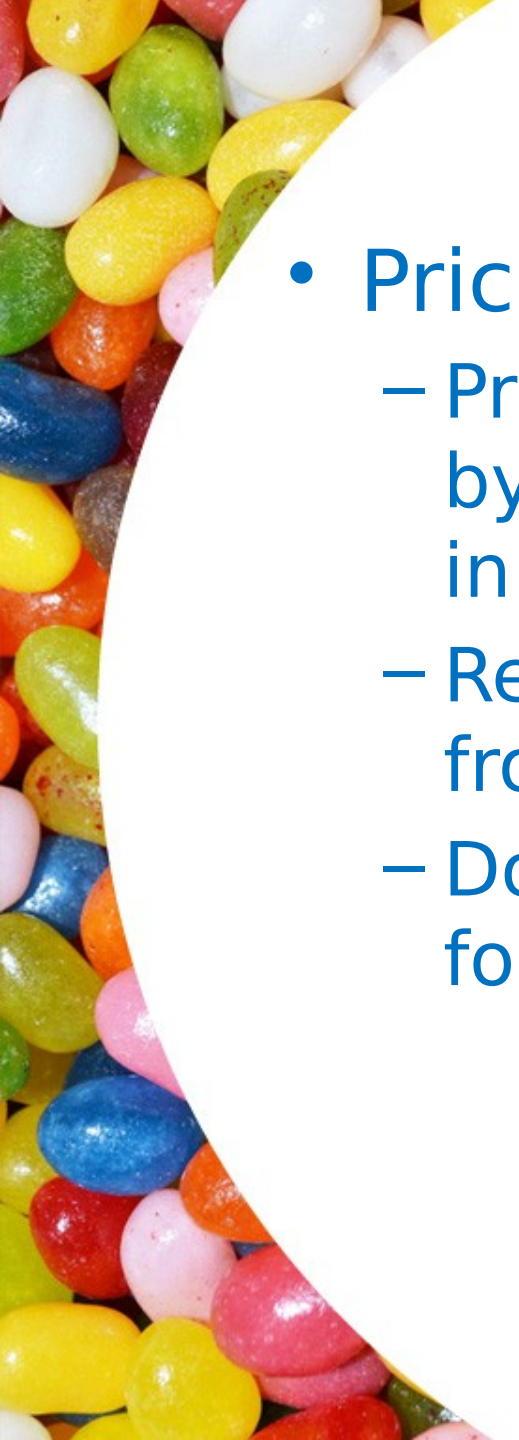
- Based on study of 837 French adults (361 men, 476 women)
- An inverse relationship exists between energy-dense foods and their costs
- Sweets and fats cost less than vegetables and fruits
- Dry, energy-dense foods provide lower cost calories than fresh produce

2010 - Drewnowski

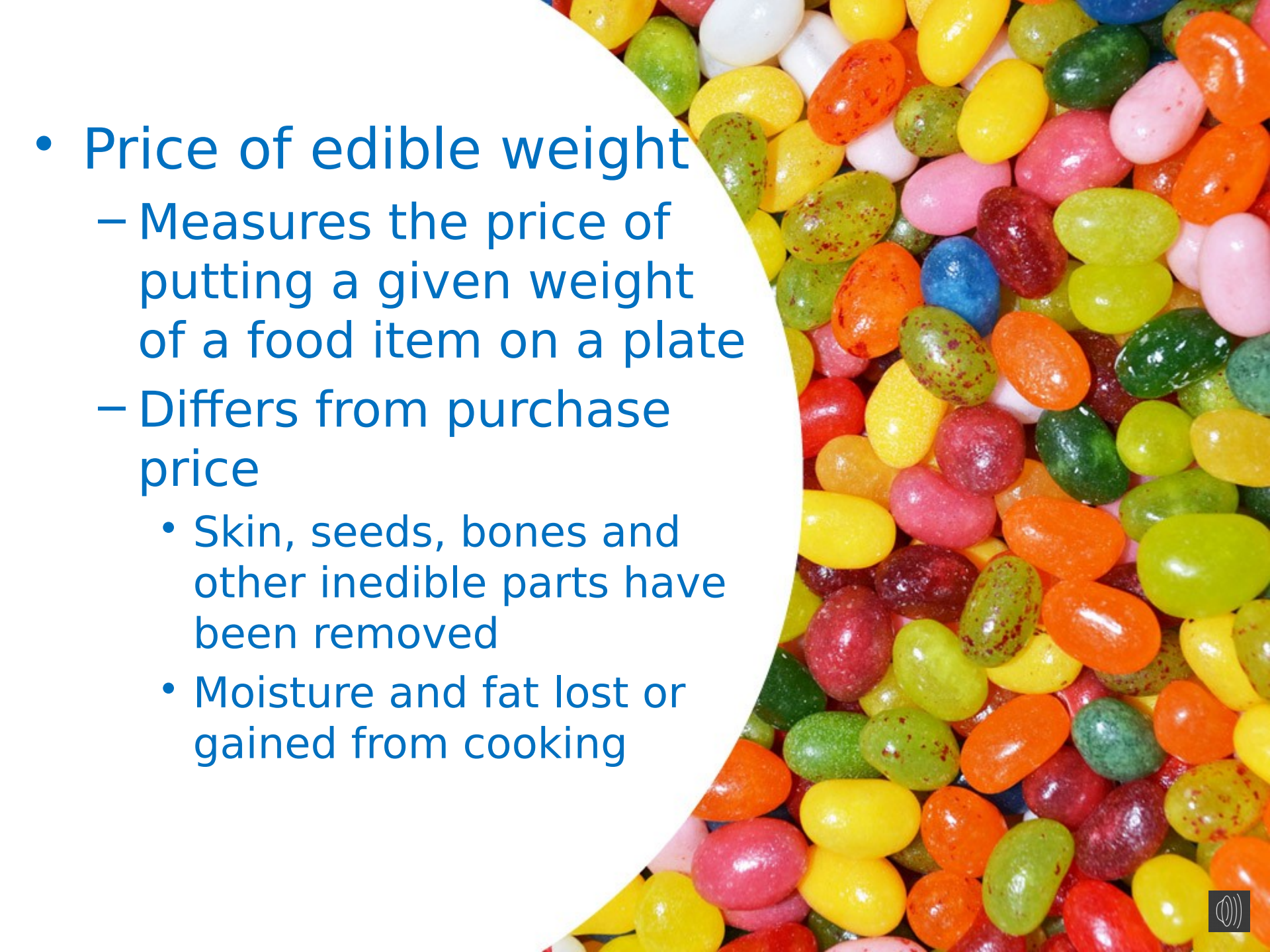
- Used price/calorie metric
- Based on the characteristics of 1387 of the 6940 foods included in the USDA Food and Nutrient Database for Dietary Studies
- “on a per calorie basis, grains, sugars and fats were cheap, whereas fruit and vegetables were more expensive”

Studies on the cost of eating healthy

- May 2012 USDA Study
  - The metric used to measure the price of food has a large effect on which foods are more expensive
    - Price/calorie
    - Price of edible weight
    - Price/portion size
    - Cost of meeting dietary recommendations



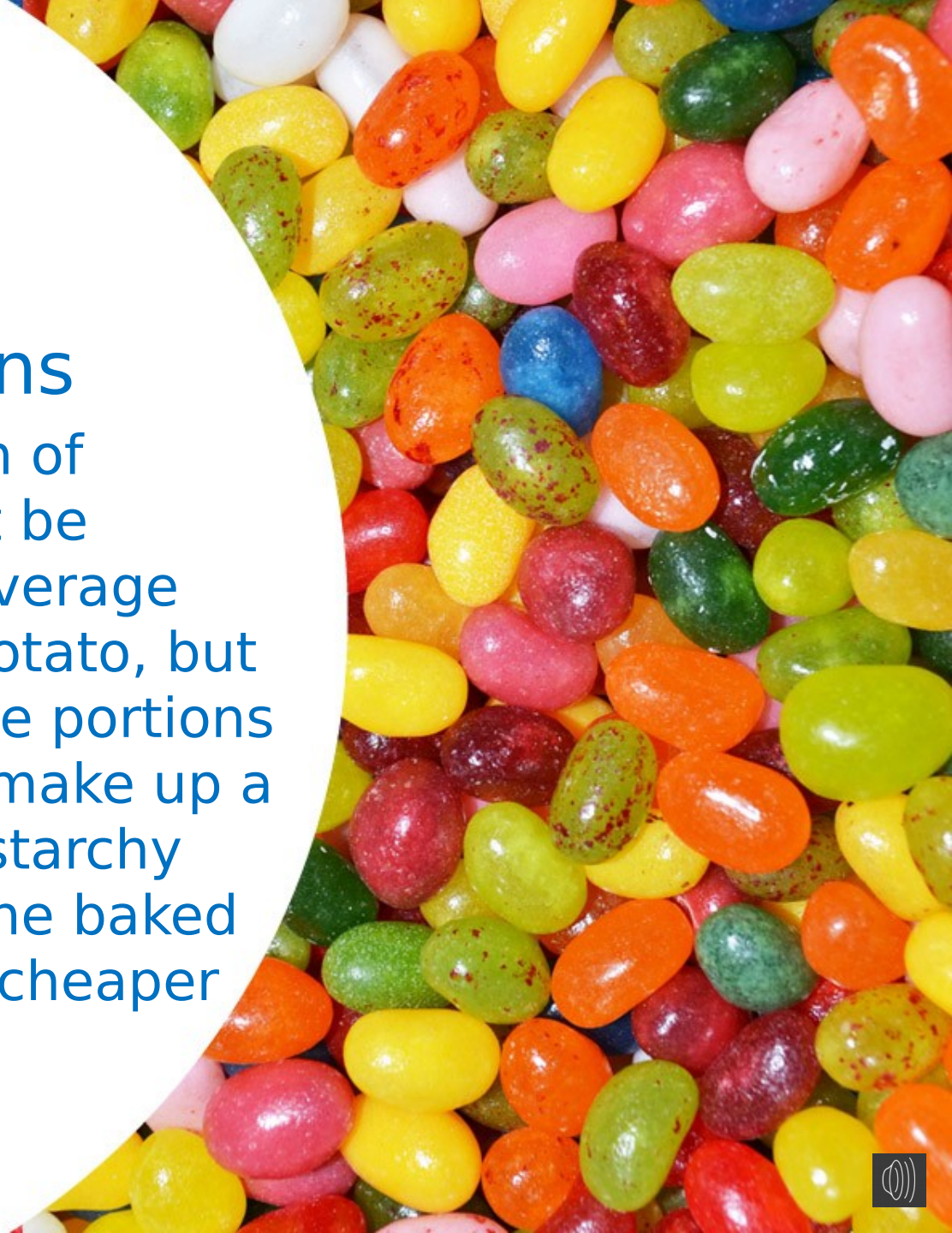
- Price/calorie metric (Drewnowski)
  - Price per 100 grams of food divided by the number of calories contained in 100 grams
  - Referenced Atwater's calculations from over a century ago
  - Does not account for the amount of food that is consumed



- Price of edible weight
  - Measures the price of putting a given weight of a food item on a plate
  - Differs from purchase price
    - Skin, seeds, bones and other inedible parts have been removed
    - Moisture and fat lost or gained from cooking

- Price per portion
  - Price of specific foods or entire meals
    - How much it costs to eat an average amount of food at a single sitting
  - Compare cost based on current level of consumption and eating patterns

- Cost of meeting dietary recommendations
  - An average portion of potato chips might be cheaper than an average portion of baked potato, but if it takes 2 average portions of potato chips to make up a cup equivalent of starchy vegetables, then the baked potato might be a cheaper way to meet the recommendation

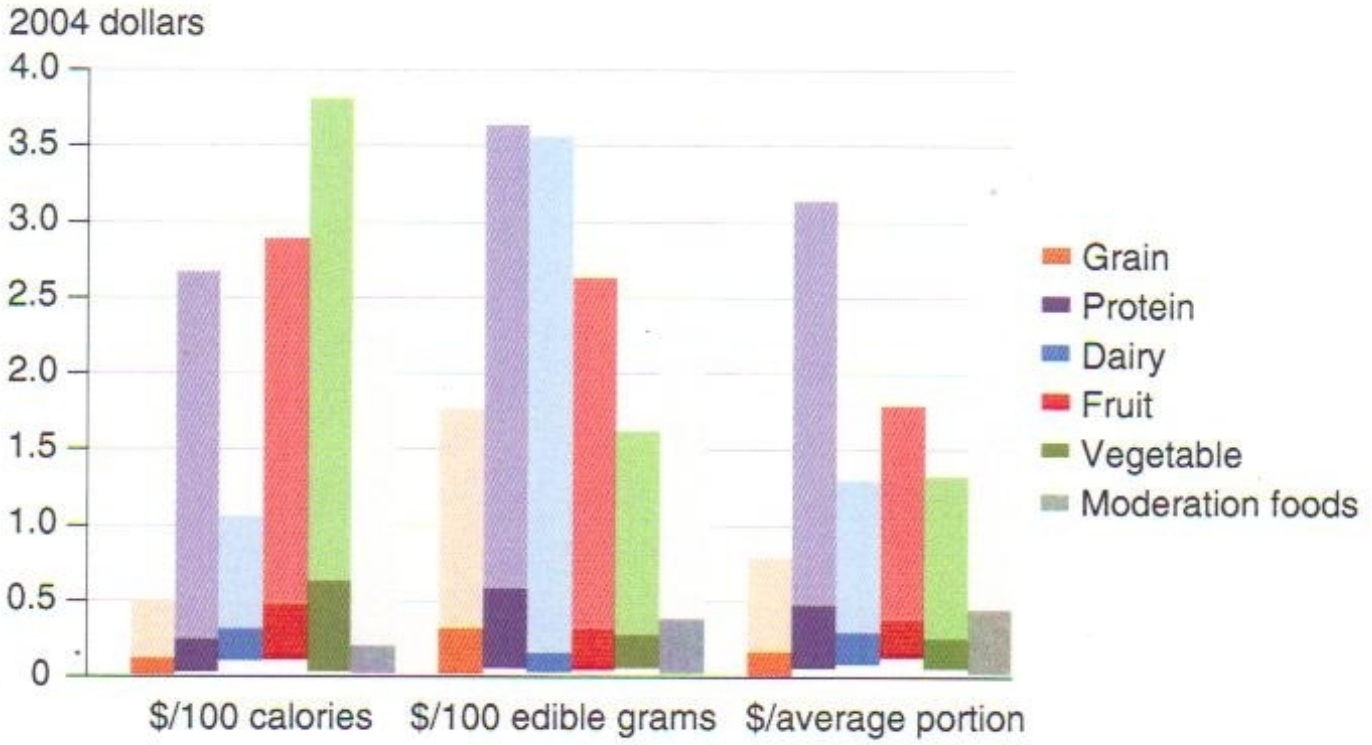


USDA Conclusions

- Grains are always the least expensive group
- Protein is most expensive when the price is measured per edible gram or average portion but ranks in the middle when price is measured per calorie
- When using price per calorie
  - Fruits and vegetables more expensive than high calorie foods
- When using price per edible gram
  - Vegetables are less expensive than either fruits or high calorie foods (whose cost is about equal)
- When using price per portion
  - Fruits and vegetables are BOTH less expensive than high calorie foods

Figure 4

The prices of healthy versus less healthy foods vary with the measurement method



For about $20, you could buy...

X

- 4 Whopper Combo Meals at Burger King ($5.44 each)

Total: $21.76

OR

✓

- 1 box Morningstar Farms Grillers Original Meatless Burgers ($2.98)
- 1 pound 96% lean ground beef ($2.98)
- 16 ounces cashews ($4.18)
- 1 pound of strawberries ($1.67)
- 10 pounds of potatoes ($2.97)
- 1 gallon of 100% orange juice ($3.26)
- 1 pound of frozen mixed vegetables (98 cents)
- 1 bunch of broccoli ($1.58)
- 1 pound bag of dried pinto beans ($1.08)

Total: $21.68

SPARKPEOPLE

For about $20, you could buy...

X

- 1 large Pepperoni Feast Pizza from Domino's ($15.99)
- 1 order breadsticks ($3.99)

Total: $19.98

OR

✓

- 1.25 pounds sweet Italian turkey sausage ($3.82)
- 1 pound of frozen tilapia fillets ($3.98)
- 1 pound 93% lean ground turkey ($1.98)
- 16-ounce jar of Smucker's natural peanut butter ($2.38)
- 1 box (40 bags) of green tea ($2.58)
- 1 pound bag of lentils (94 cents)
- 1 box of Kashi Heart to Heart crackers ($2.98)

Total: $18.66

SPARKPEOPLE

For about $20, you could buy...

X

- 8-piece KFC chicken meal
- 4 biscuits
- 2 sides

Total: $19.61

OR

✓

- 2 pounds chicken breasts ($1.96)
- 10 pounds potatoes ($2.97)
- 8 ears corn ($2)
- 1 pound peaches (98 cents)
- 1 gallon skim milk ($2)
- 1 pound 96% lean ground beef ($2.98)
- 32-ounce tub of 99% fat-free Yoplait yogurt ($2.27)
- 18-ounce canister of oats ($1.18)
- 2 pounds frozen sweet peas ($1.98)
- 1 pound of dried kidney beans ($1.22)

Total: $19.54

SPARKPEOPLE

For about $10, you could buy...

X

- 1 case (18 cans) of Bud Light beer

Total: $11.99

OR

✓

- 1 tub (15 ounces) of Smart Balance Light with Extra Virgin Olive Oil Buttery Spread ($2.43)
- 5.3 ounces of Dannon blueberry Greek yogurt ($1)
- 1 pound of grapes (88 cents)
- 1 pound of frozen tilapia fillets ($3.98)
- 1 loaf Brownberry 100% whole wheat bread ($2.50)

Total: $10.79

SPARKPEOPLE

121
122
123
124
125
126
141
142
143
144
145
146
147

Side effects of Unhealthy Eating

- Hypertension
- High Cholesterol
- Heart Disease
- Obesity
- Stroke
- Cancer

Negative Side Effects

- Hypertension
  - Systolic ≥ 140
  - Diastolic ≥ 90
- High Cholesterol
  - LDL ≥ 160
  - HDL ≤ 40
  - Total ≥ 240

Negative Side Effects

- Obesity
  - Heart disease
  - Stroke
  - Cancer

Associated Medical Costs

- Hypertension
  - Lisinopril
  - Norvasc
  - Water Pills

Associated Medical Costs

- High Cholesterol
  - Zocor
  - Lipitor
  - Crestor

Associated Medical Costs

- Obesity
- Heart Disease
- Stroke
- Cancer

Positive Side Effects of Healthy Eating

- Physical
- Mental
- Professional
- Family

Physical Benefits

- Boost immune system
- More energy
- Glowing appearance
- Improved sleep

Mental Benefits

- Live longer
- Improved mood
  - Depression
  - Lower stress

Professional Benefits

- The obesity wage penalty
  - In theory, a worker's wage is equal to the value of the services he/she generates
    - Obesity impacts your value because it is:
      - associated with higher job absenteeism, and
      - higher health care costs, which raise premiums in employer-sponsored health insurance.
  - No federal anti-discrimination protection for obese

Family Benefits

- Family dinner
  - Promotes balance and variety in everyone's diets
  - Civilizes children
  - Do as I do *and* as I say!

The true costs of unhealthy eating

- Studies show that eating healthy does *NOT* cost more
- Healthy choices
  - May take longer to prepare
    - Will add years to your life & improve the quality
    - Will benefit you professionally
    - Will make you & your family happier and healthier

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MARFORRES - Marine Corps Community Services
Semper Fit Program
2000 Opelousas Avenue, New Orleans, LA 70146
(504) 697-9768 (Fax)

http://www.marines.mil/unit/marforres/MFRHQ/MCCS/SemperFit/Health.aspx

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mfr_semper_fit@usmc.mil

Semper Fit Director	Health Promotion Coordinator	Semper Fit Coordinator
(504) 697-8121	(504) 697-9693	(504) 697-9691